

DIGITAL DELAY-LOCKED LOOP CIRCUITS
WITH HIERARCHICAL DELAY ADJUSTMENT

Abstract of the Disclosure

[0056] Fine tuned signal phase adjustments are
5 provided by multiple cascaded phase mixers. Each phase
mixer outputs a signal having a phase between the
phases of its two input signals. With each subsequent
stage of phase mixers, the signals generated by the
phase mixers have a smaller phase difference, thereby
10 providing finer delay adjustments. Multiple stages of
phase mixers can be provided in digital delay-locked
loop circuitry to provide additional hierarchical delay
adjustment.